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10/562,624

12/23/2005

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EXAMINER

KOCH, GEORGE R

ART UNIT

PAPER NUMBER

1791

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                       |  |  |
|------------------------------|---------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/562,624  | <b>Applicant(s)</b><br>HALFMANN ET AL. |  |
|                              | <b>Examiner</b><br>George R. Koch III | <b>Art Unit</b><br>1791                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12-23-2005</u> .  | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3, 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 3 recites the limitation "the distance measuring system" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. This appears to be the first recitation of "distance measuring system". It is unclear whether this is a new element, or whether "path measuring system" was intended.

4. Claim 3 recites the limitation "said marks" in lines 2. There is insufficient antecedent basis for this limitation in the claim. This appears to be the first recitation of "said marks".

5. Claim 5 recites the limitation "a memory" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is unclear whether this is the same memory or a different memory than the memory of parent claim 1. For the purposes of examination, examiner is treating this element as a separate element from the memory element recited in claim 1.<sup>1</sup>

6. Claim 6 recites the limitation "a memory" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is unclear whether this is the same memory or a different memory than the memory of parent claim 1. For the purposes of examination, examiner is

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<sup>1</sup> Applicant's specification includes multiple memories, and it is noted that the deleted reference numbers are different, suggesting that applicant intended for the memory of claim 5 to be a different element than the memory of claim 1.

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treating this element as a separate element from the memory element recited in claim 1 but the same as the memory element of claim 5.<sup>2</sup>

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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<sup>2</sup> Applicant's specification includes multiple memories, and it is noted that the deleted reference numbers are different, suggesting that applicant intended for the memory of claim 6 to be a different element than the memory of claim 1. However, it appears from the deleted reference numbers that the memory of claim 6 is the same as the memory element of claim 5.

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellenberger (US 6,129,809) in view of Pelland (US 6,053,230) and Asar Madhu (4,317,695).

As to claim 1, Ellenberger discloses a plastic welding machine capable of connecting in substance at least two plastic layers, the welding machine comprising: a welding tool (item 7), drive rollers (items 8 and 9), an electronic control device (Figure 3) comprising a computer (item 22) for controlling the temperature of the welding tool (recited in column 4, lines 37-60 and column 5, lines 27-48) and for setting and regulating the pressure of the drive rollers (see column 4, lines 14-29), wherein: a) the electronic control device controls the welding of the two layers section by section, wherein primary welding parameters, which are preset by the process program at the beginning of the particular welding section and are characteristic of the given section, said welding parameters including at least one of temperature of the welding tool or of the particular welding medium (see the description of the process i, the velocity of feed of the two drive rollers or of one of the two drive rollers, the roller pressing pressure, are set (see column 5, lines 3-18, which discloses set points for the tape temperature controller 41, the air heater controller 37, the roller speed/velocity feed controller 24, and the air cylinder roller pressing pressure controller 29; see also column 4-5 for further descriptions of these controls); b) the welding machine comprises a path measuring system (such as tachometer 26, see column 4, lines 5-13), which is connected to the electronic control device (see column 4, lines 5-13, especially in reference to the connection of tachometer 26 to computer 22) for determining the

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path section of the layers welded together during the welding operation; and c) the electronic control performs a *measurement* of the measured path section of the particular layers welded together (see operation of sensor 35, see also column 5, line 66 to column 6, line 12) and sets the welding parameter characteristic of the corresponding new welding section (Id., and see especially the statement that "the velocity of the feed decrease, and the nozzle is raised by a few mm". Ellenberger appears to suggest that a comparison occurs (since the section discloses that the sensor 35 data is sent to the computer 22, and then there is a response, suggesting that the computer compares the data to a parameter.)

Ellenberger does not disclose that the electronic control device has at least one *memory*, into which the process program can be loaded.

However, Asar Madhu discloses the use of memory and programs loaded on the memory in the context of an apparatus for joining plastic tapes (see column 7, lines 15 to column 8, line 20). Asar Madhu discloses that the use of memory and programs (in conjunction with the microcomputer/processor elements) allows for "any line of a port [to] be configured (programmed through conventional software) to be either an input or an output line". A person having ordinary skill in the art, reading this passage, at the time of the invention, would recognized that Asar Madhu recognized the benefits of programming in providing flexibility of operation, and the use of certain elements such as memory and programs to achieve that flexibility. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used memory and programs in order to achieve flexibility in operation.

Ellenberger also does not disclose that the electronic control device performs a *comparison* between the measured path section of the particular layers welded together and a

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***preset value*** characterizing the beginning of the next welding section and sets the welding parameter characteristic of the corresponding new welding section in case of agreement between the measured value and the preset value. As noted above, Ellenberger clearly suggests measuring the path section with sensor 35 and appears to suggest that a comparison occurs (since the section discloses that the sensor 35 data is sent to the computer 22, and then there is a response, suggesting that the computer compares the data to a parameter.)

Additionally, Pelland discloses that it is known to manually perform comparisons between preset values and actual results, and then using the results to update the controller values (see column 5 and 6, with focus on the operator adjusting due to curved sections). Furthermore, automation of manual activity is generally obvious. See MPEP 2144.04 III.<sup>3</sup> Additionally, as noted above, Ellenberger discloses automation structure capable of performing the manual activity of comparison of measured results with preset values. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used an electronic control device that performs a ***comparison*** between the measured path section of the particular layers welded together and a ***preset value*** characterizing the beginning of the next welding section and sets the welding parameter characteristic of the corresponding new welding section in case of agreement between the measured value and the preset value since Ellenberger discloses the control device capable of doing the control function and Pelland discloses manually performing the comparison functions, and automation of known manual activity is obvious.

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<sup>3</sup> *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958) (Appellant argued that claims to a permanent mold casting apparatus for molding trunk pistons were allowable over the prior art because the claimed invention combined "old permanent-mold structures together with a timer and solenoid which automatically actuates the known pressure valve system to release the inner core after a predetermined time has elapsed." The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art.).

As to claim 2, Ellenberger discloses that the path measuring system comprises at least one tachometer generator (see column 4, lines 5-13, disclosing a tachometer generator 26).

As to claim 3, Ellenberger discloses a sensor (sensor 35), which scans said marks that define the individual welding sections and are arranged on the material to be welded, is provided as the distance measuring system (see column 5, line 66 to column 6, line 12).

As to claim 4, Ellenberger does not disclose that the two drive rollers can be driven at different speeds of rotation.

However, Pelland discloses that the two drive rollers can be driven at different speeds of rotation (see column 5, line 25 to column 6, line 9). Pelland discloses that the ability to make wheel speed corrections allows for correction if one piece of plastic gets ahead of another piece of plastic, especially when the pieces are curved. (Id.). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized drive rollers can be driven at different speeds of rotation in order to ensure that the plastic pieces are joined properly.

As to claim 5, Ellenberger discloses that the control device has data that can be displayed on a display screen (control panel 50) of the welding machine and show comments and/or settings of the welding tool that are associated with operation can be stored.

Ellenberger is silent as to memory and welding process programs, but Asar Madhu as incorporated in claim 1 discloses and makes obvious the use of memory and process programs



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for storing parameters and programs. Additionally, Pelland discloses that a control interface for a hot welding system would include keypads, switches, and displays, and that these elements allow “the operator to more easily establish and set the exact speed and temperature parameters for the welding process.” A person having ordinary skill in the art, reading these passages, at the time of the invention, would recognize that Asar Madhu recognized the benefits of programming in providing flexibility of operation, and the use of certain elements such as memory and programs to achieve that flexibility, and would recognize that Pelland suggests the benefits of displaying these parameters on a display. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used memory and programs in order to achieve flexibility in operation. (And see the rejection of claim 1 for further analysis of the obviousness of using memory and process programs.).

As to claim 6, Ellenberger discloses that the computer contains secondary roller<sup>4</sup> and welding tool parameters (see column 5), which can be set by the computer before the start of the welding operation and remain effective for the entire welding operation comprising a plurality of said welding sections. Ellenberger is silent as to memory and process programs, but Asar Madhu as incorporated in claim 1 discloses and makes obvious the use of memory and process programs for storing parameters and programs. A person having ordinary skill in the art, reading this passage, at the time of the invention, would recognize that Asar Madhu recognized the benefits of programming in providing flexibility of operation, and the use of certain elements

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<sup>4</sup> This claim does not require that the drive rollers/secondary rollers be driven at the same or different speeds, and therefore Ellenberger reads on this limitation. However, if the claim required different speeds, applicant is given notice that Pelland discloses the concept of differential drive roller speeds, and the rationale applied in claim 4 would apply.

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such as memory and programs to achieve that flexibility. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used memory and programs in order to achieve flexibility in operation. (And see the rejection of claim 1 for further analysis of the obviousness of using memory and process programs.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can also be reached by E-mail at [george.koch@uspto.gov](mailto:george.koch@uspto.gov) in accordance with MPEP 502.03. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/George R. Koch III/  
Primary Examiner, Art Unit 1791

2-15-2009